

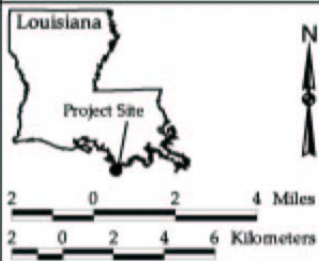
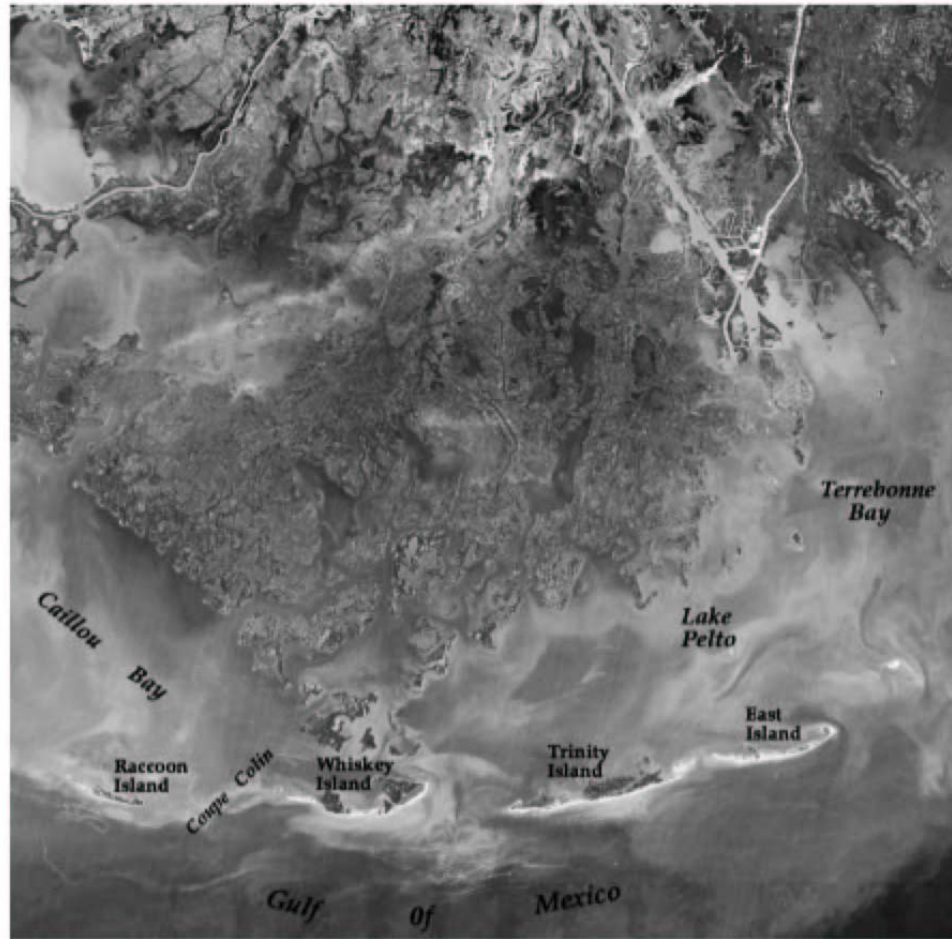
# Isles Derniers Barrier Island Chain Whiskey Island Restoration

- Selected on PPL 3
- Construction finished August 25, 1998
- Location:



# Project Location

- Project Features
  - Create 355 acres wetlands to heights ranging from +1 to +4ft NAVD using sediment dredged from Caillou Boca
  - Close breach at Coupe Nouvelle
  - Vegetative plantings



Data Source:  
LA Dept of Natural Resources  
Coastal Restoration Division  
Database Analysis Section

1994 Satellite Imagery

Date: June 17, 1998  
Map ID: 98-5-054

# Planning

- Assumed Causes of Loss:
  1. Repeated storm impacts:
    - a. Deplete barrier sand reservoir
    - b. Wash sands into tidal inlet & inner-shelf sinks
    - c. Periodic storms, eroding cuts or inlets into the shoreline

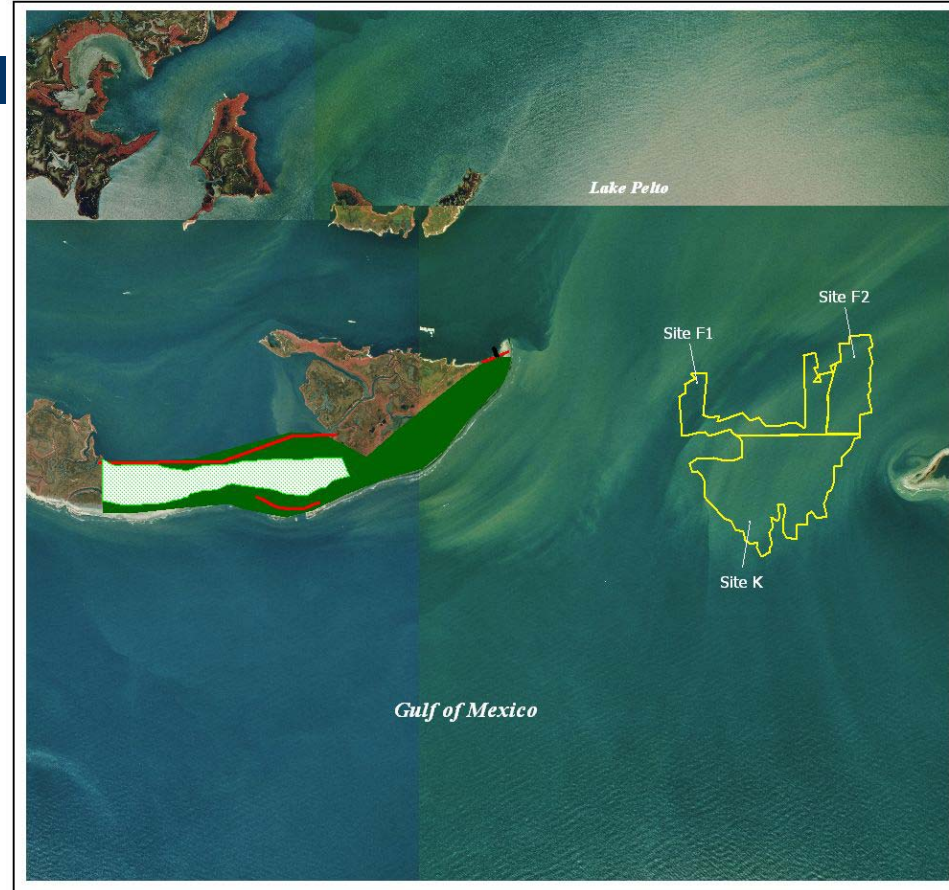
# Goals and Objectives

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- Strengthen & stabilize the island using natural building components
- Add sediment to system
- Increase the elevation & width of the island
- Close breaches
- Plant vegetation

# Construction

- Final Features
  - ~355 acres emergent platform from 1-4+ feet NGVD
  - Plantings:
    - marshhay cordgrass (*Spartina patens*)
    - smooth cordgrass (*Spartina alterniflora*)
    - bitter panicum (*Panicum amarum*)



# Physical Response

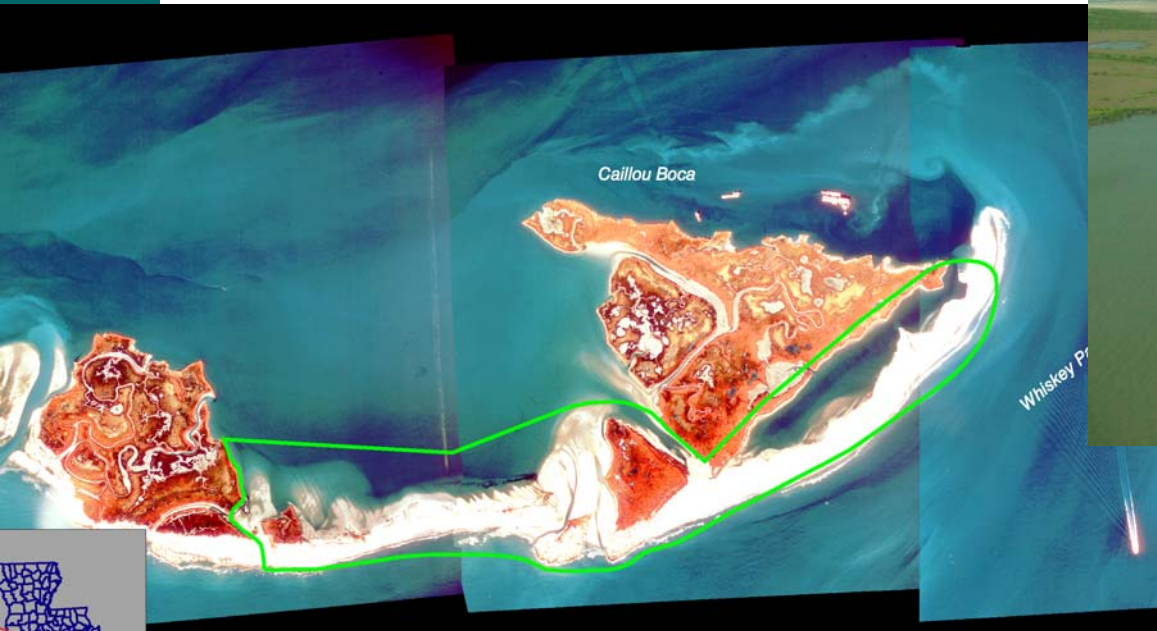


# Biological Response



# Landscape Response

- Optimal landscape is not known for a Louisiana barrier island at the present time.



# Project Adaptive Management

- Implemented Changes
  - Added sand fences



# Project Adaptive Management

- Recommended Improvements
  - Addition of sediment
  - Additional width



# Isles Derniers Restoration East Island and Trinity Island

- Selected on PPL 1 & 2, respectively
- Construction finished 1998 & Vegetated 1999
- Location:



# Planning

- Assumed Causes of Loss:  
Consequence of a complex interaction among:
  - a. Global sea level rise
  - b. Compactual subsidence
  - c. Wave & storm processes
  - d. Inadequate sediment supply
  - e. Intense human disturbance



# Goals and Objectives

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- Enhance the physical stability of the barrier island chain
  - Restore the coastal dune and marsh platform
  - Reduce loss of sediment
  - Plant vegetation

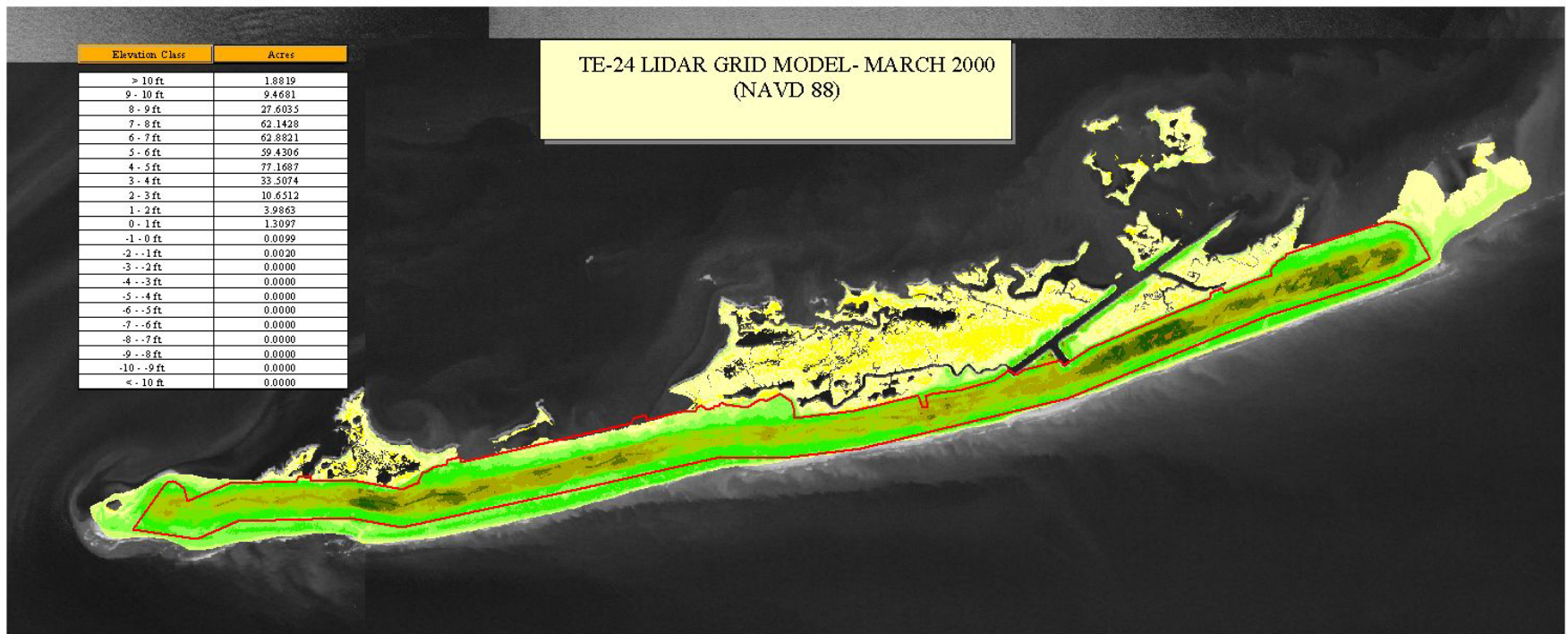
# Project Features

- Create an elevated dune
  - ~8ft NGVD and 200 ft wide
- Create an elevated vegetated platform
  - ~4ft NGVD and 100-350 ft wide
- Sand fencing
- Vegetation (seeded & planted)



# Monitoring Variables

- Elevation
  - LIDAR Survey
- Vegetation Composition & Cover



# Biological Response

Trinity Island



# Biological Response

Trinity Island





## East Island

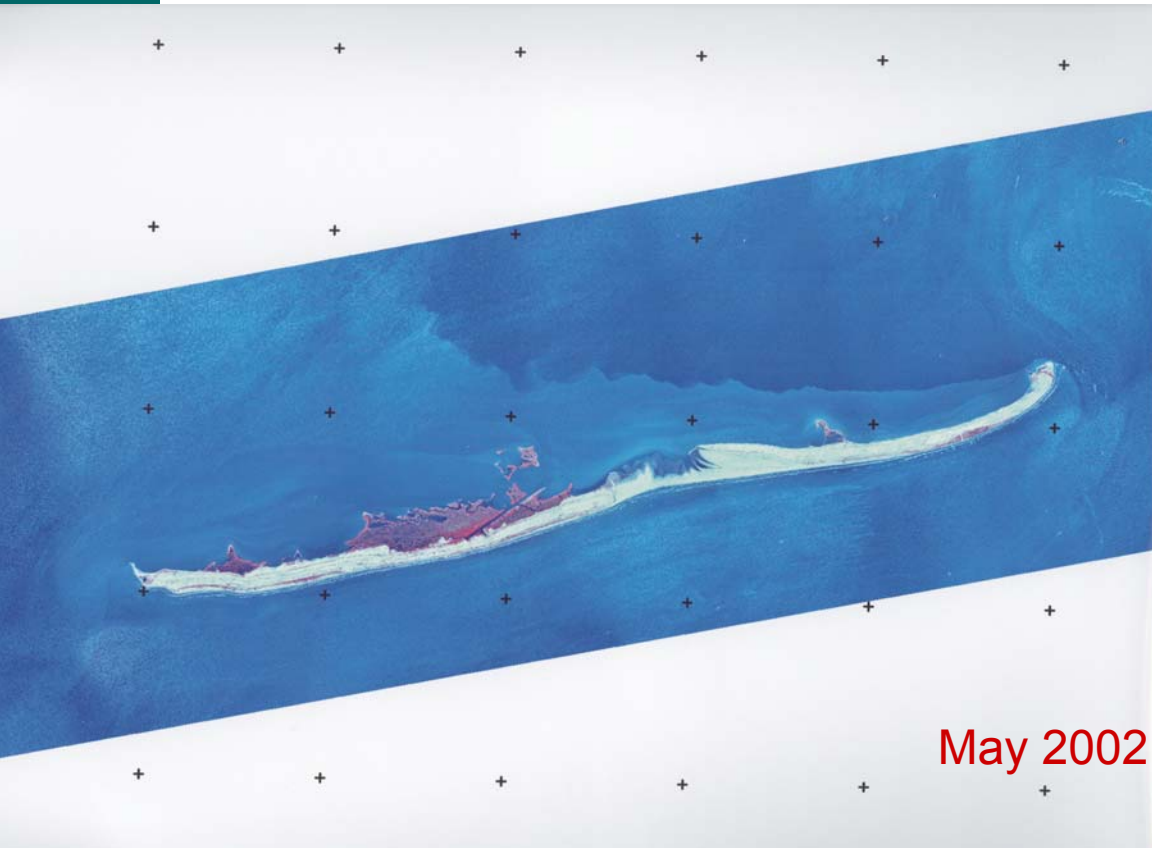


# Response

Trinity Island



# Landscape Response



- Making progress towards restoring the barrier island chain
- Dunes maintaining their elevation
- Vegetative cover has increased slightly after construction



MAY 8 2002